

February 26, 1960

Mr. John E. Pfeiffer
New Hope, Pennsylvania

Dear Mr. Pfeiffer:

To yours of the 13th.

I must have been a behaviorist before I had learned much about evolutionary genetics or immunology. At least your letter made me think back about this, and to realize that a theory of learning based on conditioned reflexes shows the power of retrospective election for handling many biological situations. At one time, this was probably the only current neurological theory of learning--all the synaptic connections were already in being; learning consisted of facilitating the particular pathways that were repetitively used, and associating pathways with one another. More recently, Sperry's work, and consistent failures to localize the engrams ~~may~~ have cast some doubt on the validity of a strictly morphological interpretation of this kind. But I will be immensely surprised if chemical specificity comparable to that of immunity plays an important role in behavioral diversification. But you would be right ~~not~~ to put much weight on a mere intuition.

Yours cordially,

Joshua Lederberg